

Date: Tue, 30 Aug 94 04:30:17 PDT
From: Ham-Digital Mailing List and Newsgroup <ham-digital@ucsd.edu>
Errors-To: Ham-Digital-Errors@UCSD.Edu
Reply-To: Ham-Digital@UCSD.Edu
Precedence: Bulk
Subject: Ham-Digital Digest V94 #289
To: Ham-Digital

Ham-Digital Digest Tue, 30 Aug 94 Volume 94 : Issue 289

Today's Topics:

 56k modems?
 9600 baud using Kenwood TM201 & TM401
 Balloon Flight is on Again...
 DXcluster access over Internet
 FT5200 and 9600 Baud
 Help.. I want to start
 MSYS and WP pages
 Need 9600 baud mod info for IC271/471
 Packet Radio with apple LC ?
 TNC-2 Source
 Unix vs DOS vs OS/2 vs NT

Send Replies or notes for publication to: <Ham-Digital@UCSD.Edu>
Send subscription requests to: <Ham-Digital-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Digital Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-digital".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 28 Aug 94 17:15:00 GMT
From: ihnp4.ucsd.edu!swrinde!emory!wa4mei!totrbbs!steve.diggs@network.ucsd.edu
Subject: 56k modems?
To: ham-digital@ucsd.edu

-> From: mcdonneb@iaa.org (b.j. mcdonnell)
-> Newsgroups: rec.radio.amateur.digital.misc
-> Subject: 56k modems?
-> Date: 25 Aug 1994 18:48:18 GMT
-> Message-ID: <33ip1i\$q2p@ankh.iaa.org>
->
-> Help I am trying to locate 3 or 4 "DSY" 56k modems and transverters

-> for a packet network here in the US Virgin Islands.

->

-> E-mail to mcdonneb@iia.org

Here you go, Sir. Also, keep in mind that Down East Microwave is now selling transverters for this application.

Regards,
Steve Diggs

----- cut here -----

Heatherington WA4DSY 56KB RF Modem

GRAPES (a Non-Profit Volunteer Organization of Georgia Amateur Radio Operators) is selling full kits of the WA4DSY 56KB RF Modem for \$250. The proceeds from the kits support our packet network building activities.

You will need a transverter with a 28 MHz I.F. for the band of your choice, a case, connectors, power supply and frequency determining crystals. The printed circuit boards, documentation, State EPROM, support diskette and all other parts are supplied.

The transverter chosen should switch as quickly as possible in the 5-15 msec range to be effective. We use the Microwave Modules MMt 432-28S units; however, these are getting difficult to find except as used ones at hamfests. The last few we purchased new were also pretty expensive (\$389). We believe that their 220 MHz units were quite a bit cheaper, but we've never bought any new. On the hamfest market, we have been paying \$125 to \$185 for used, normally working units.

Maple Leaf Communications (Bob Morton, VE3BFM) is shipping a 220 transverter which has good characteristics and an even better price tag (\$279). We have two of these units and they seem to work fine. Contact Bob at 705-435-0689 or RR #1, Everett, ONTARIO, Canada, L0M 1J0.

The transverter must be linear as the modem has amplitude variations as part of the conveyed modulation, which must be reproduced by the transverter. Usually any transverter capable of SSB operation is suitable if it switches quickly enough.

We also sell a printed circuit board set that includes the State EPROM, documentation and support diskette for \$110. Documentation sets are available separately for \$20 and we have a VHS (beta by special request) Video tape featuring Dale Heatherington explaining the Beta modem design for \$20.

Documentation sets are creditable towards the full parts kits or board sets

and the board sets are also creditable towards the full parts kits.

We pay U.S. shipping, however, we do require that the approximate difference between domestic ground delivery and premium shipping be sent in advance. Overseas second day air can cost up to \$60 per kit! The kits weigh about 2.5 pounds each, and we can put 3 to 4 kits in a single box to save on shipping.

Please send orders (a letter is fine) and your check payable in U.S funds to:

GRAPES, Inc.
PO Box 636
Griffin, GA 30224-0636

We're sorry but we cannot accept Purchase Orders nor Credit Cards. Please allow four to six weeks for delivery.

THANKS!! Bob KA4BYP, email: ka4byp@netcom.com

....56kb....56kb....56kb....56kb....56kb....56kb....56kb....56kb....56kb....

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```
Bob Merritt KA4BYP -----\ /-----
PO Box 185 > email: ka4byp@netcom.com <
Griffin, GA 30224 -----/ \-----
<<<>>>
```

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Top Of The Rock BBS - Lilburn, GA      SYSOP: Steve Diggs
UUCP: tottribbs.atl.ga.us              Snailmail: 4181 Wash Lee Ct.
Phone: +1 404 921 8687                  Lilburn, GA 30247-7407
```

Date: Mon, 29 Aug 94 08:55:17 PDT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!gatech!
newsxfer.itd.umich.edu!zip.eecs.umich.edu!yeshua.marcam.com!news.kei.com!
ssd.intel.com!chnews!news@network.ucsd.edu
Subject: 9600 baud using Kenwood TM201 & TM401
To: ham-digital@ucsd.edu

Does anyone have 9600 baud mod information for the Kenwood TM201 (2meters) and TM401 (70cm) FM radios? Please post here or send direct.

Thanks, 73s
Tom WB7ASR...

tom_boza@ccm.hf.intel.com

Date: 28 Aug 94 16:22:17 MDT
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!news.cs.utah.edu!cc.usu.edu!
danander@network.ucsd.edu
Subject: Balloon Flight is on Again...
To: ham-digital@ucsd.edu

Due to a problem with the GPS receiver and on-board BASIC computer, the balloon flight was delayed for approximately 2 weeks. The new flight is scheduled for Tuesday August 30th 1994 at 2pm MDT.

This balloon flight is rather unique in that it is a prototype concept when one of the first data acquisition system is sent to the Martian Surface. The general concept is that the balloon will become heated and rise during the daytime, and at night it will descend. Dragging behind the balloon will be a type of funnel to "suck" up materials off of the Martian surface. The materials will be analyzed by an on-board computer and then the data telemetered to an orbiting satellite which in turn amplifies the signal to be sent back to earth.

The amateur balloon flight for this launch has on board:

BASIC Computer for making temperature and pressure measurements
TNC
IC2SAT 2 meter transceiver
TRW GPS Receiver for position fixes
ARGOS Satellite Transmitter (TELONICS Model ST5)

The payload was put together by Engineering Students at Utah State University.

I can be reached at:

Internet: danander@cc.usu.edu
Packet: KA0E0F@N7UWX.UT.USA.NA

Thanks for reading this message.

73
Dan

Below is the original message I sent out.

```

>Mars Aerial Platform(MAP) Balloon Packet Format:
>
>Call Sign N7UXC
>
>Field      Description
>First Line
> 1         GPS Available (1=Yes, 0=No)
> 2         # Satellites available (3=2 Dimensional, 4=3D)
> 3         GPS Date/Time UTC (Example 8/02/1994 09:15:45:333)
> 4         Latitude (Example N 45Ú22.45)
> 5         Longitude (Example (W 111Ú 22.45)
> 6         Altitude (Meters)
> 7         Velocity east (m/s)
> 8         Velocity north (m/s)
> 9         Velocity up (m/s)
>Second Line
> 10        Balloon Temp (ÚC)
> 11        Inside payload temp (ÚC)
> 12        Outside payload temp (ÚC)
> 13        Balloon differential pressure (inches of water)
> 14        Battery Voltage
> 15        Argos flag
>
>The packets will be transmitted every 90 seconds on 145.750 Mhz.
>
>I would appreciate copies of the data that anyone might collect.
>If hard copy, please send to:
>
>          Stan Wellard N7UXC
>          1695 North Research Park Way
>          Logan, Utah 84321-1942
>
>

```

```

-----
Date: 29 Aug 94 12:47:28 GMT
From: news-mail-gateway@ucsd.edu
Subject: DXcluster access over Internet
To: ham-digital@ucsd.edu

```

Friends,

I'm trying to access US dxclusters while connected to internet.
I know there are a number of AX25<>Internet gateways in the states (found quite a number of them). I discovered also that once connected to these nodes I have access to hundreds of TCP/IP nodes. But... I can not see the trees through the forest anymore.

There must be a number of gateways or TCP/IP nodes who give access to local DXclusters, if not via IP, then via a VHF or UHF port (if not linked through real IP ports)...

So far I found cluster access in W5, KH6 and KL7 - land. I'm particular looking for DXclusters on the east coast, westcoast and midwest. But... any tips are welcome.

Pse reply to my Internet address: p_casier@ub4b.eunet.be

Tnx! - Peter ON6TT.

p_casier@ub4b.eunet.be

Date: 28 Aug 94 17:08:00 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!swrinde!emory!wa4mei!totrbbs!
steve.diggs@network.ucsd.edu
Subject: FT5200 and 9600 Baud
To: ham-digital@ucsd.edu

-> Newsgroups: rec.radio.amateur.digital.misc
-> From: peterm@elec.gla.ac.uk (Peter Miller)
-> Subject: FT5200 and 9600 Baud
-> Message-ID: <Cv32Ky.2Jq@udcf.glasgow.ac.uk>
-> Date: Thu, 25 Aug 1994 09:05:21 GMT
->
-> Hi. I have an 18 month old FT5200 and would like to use it for 9600
-> baud packet. Does anyone have experiences and suggestions?
-> Please reply by e-mail and I will post summary.

Peter,
I have a SPANISH mod file for this rig...<grin> don't know how much good it will be to you...if you get it translated, please return an English version back, and I'll store it on my BBS for EVERYONE to get their hands on..

Regards,
Steve Diggs, KB4ZTN

-----cut here -----

FT5200.9k6

Hola a todos...paso a detallarles la reforma para utilizar el transeptor yaesu en 9k6.

De echo se trata de un dual bander, teniendo un buen desempe.o en 9k6, Ubicamos la patita 13 del modulo de recepcion (inmediatamente despues del filtro ceramico cf1001, este esta entre las patitas 10, 11, y 12 del modulo) y ahi tomamos la se.al de recepcion para VHF, luego buscamos la patita 27 (en este caso el filtro esta entre las patas 24, 25, y 26) y ya tenemos el audio para UHF en recepcion.

Para transmosion tenemos un punto comun, que es la union de los preset que ajustan el audio de ambos transmisores...estos son vr1001 y vr1003, muy chiquitos y habra que tener cuidado al trabajar en ese lugar. Justo en ese punto le aplicamos no mas de 1 volt pep y no mas...con eso tendremos la desviacion justa.

Si queremos tener mejor recepcion y la posibilidad de usarlo con los satelites, debemos cambiar el (o los) filtro ceramico de 455, en estos casos tiene puesto el cfw455 "E" de 12 kcs y reemplazarlo por un cfw455 "D" de 15 kcs (en ambos casos a -6 db), dandonos un poco de tolerancia para compensar el efecto doppler del satellite (tengamos en cuenta que el equipo se corre de 5 a 5 kcs).

Esta reforma la hice hace mas de un a.o y recien ahora la probe a fondo y su comportamiento es exelente...cualquier comentario o duda qrv.....Omar

73's de Omar - LU5EO @ LU5Eo.#SUR.BA.ARG.SOAM

----- cut here -----

Top Of The Rock BBS - Lilburn, GA
UUCP: tottribbs.atl.ga.us
Phone: +1 404 921 8687

SYSOP: Steve Diggs
Snailmail: 4181 Wash Lee Ct.
Lilburn, GA 30247-7407

Date: Fri, 26 Aug 1994 00:48:00 GMT
From: ihnp4.ucsd.edu!agate!iat.holonet.net!bthouse!mike.grose@network.ucsd.edu
Subject: Help.. I want to start
To: ham-digital@ucsd.edu

P>From: parickj4560@cobra.uni.edu
>Newsgroups: rec.radio.amateur.digital.misc
>Subject: Help.. I want to start in digital!
>Date: 22 Aug 94 00:24:54 -0500
>Message-ID: <1994Aug22.002454.30922@cobra.uni.edu>
>Organization: University of Northern Iowa

P> Hello fello hams!

P> I have a Macintosh Se along with a Yaesu Ft 301AD (1978) I think. I
>have about zero knowledge about digital HF'in or digital modes at that.

P> The radio has a FSK setting but I don't know if this matters....

P>I would like to try digital communications but I don't know what sort of tnc
>or
>equipment I need. I plan on going HF digital first because I have to 2m gea
>(yet). So if anyone out there could help me in descisions and give me a quic
>rundown of the most popular modes... I would apreciate it! Prices would help
>too! thanks es 73's de N0ZYA -jmp- Waterloo,Iowa
>---

Hello parick. glad to see you wanting to get into digital modes. I
have two tnc's that I like very much. I have an AEA PK-232MBX that
works great. It is simple to run, a little awkward at first.It will
do all modes except GTOR. The price runs around \$275-300. I also
have a Kam-Plus tnc that I recently purchased. It is more complicated
to run than the AEA. It will do all modes including GTOR. The big
difference between the Kam and AEA is that the Kam will work HF and
VHF at the same time. The AEA will only work one at a time. The
price for it is about \$300.00. There is a lot of dx you can get on
hf, and I feel you will enjoy it a lot. It is a little intimidating
at first, though. I will also recommend buying the PC-Packratt II
for the AEA, and the Host Master II for the Kam. Be sure to tell
them it is for a Macintosh computer. Mfj also makes them, but they
don't have all the frills the others do, and the price isn't that
much cheaper. Good luck, and I hope to meet you on Hf sometime.
73's...Mike, KE4CLE

* QMPro 1.50 42-2694 * All rising to a great place is by a winding stair.

Date: 29 Aug 1994 17:48:20 GMT
From: newsgw.mentorg.com!wv.mentorg.com!hanko@uunet.uu.net
Subject: MSYS and WP pages
To: ham-digital@ucsd.edu

In article <1994Aug28.172043.17651@news.csuohio.edu>, sww@csuohio.edu (Steve Wolf)
writes:

|> Demetre Ch. Valaris (sv1uy@nest.sv1uy.ampr.ORG) wrote:
|> : Does anyone know how can I change, in MSYS117, the packet address where

|> : the system automatically sends WP pages updates??? I have a real problem
|> : here and the manual does not explain anything about this. I have the f.....
|> : manual but no joy.
|> : +-----+
|>
|> Page 56, the command MASTERSRV is explained.
|>
|> MASTERSRV N6IYA.#NOCAL.CA.USA.NA

Actually, it is N6IYA.#NOCAL.CA.USA.NOAM

|>
|> in your MSYS.DO will do it for you.
|>
|> 73,
|> Steve
|>
|> ag807@cleveland.freenet.edu
|> no8m@no8m.#neoh.oh.usa.na
|>

--

Hank Oredson @ Mentor Graphics Library Operations
Internet : hank_oredson@mentorg.com "Parts 'R Us!"
Amateur Radio: WORLI@WORLI.OR.USA.NOAM

Date: 28 Aug 94 16:23:00 GMT
From: ihnp4.ucsd.edu!swrinde!emory!wa4mei!totrbbs!steve.diggs@network.ucsd.edu
Subject: Need 9600 baud mod info for IC271/471
To: ham-digital@ucsd.edu

-> Bob Donnell, kd7nm bob@ethanac.kd7nm.ampr.org
-> rdonnell@eskimo.com Western Washington Amateur IP Address Coordinator
-> (206) 775-3651

Thanks VERY much for the reply, Bob. Seems my MastrII is one of the latter types you described. I picked it up at the Dayton Hamfest this year, and from the guys here in Atlanta who use MII's for voice repeaters, this one is of the newest production designs they've seen. My exciter has numerous adjustments to it; most of them are vertical metal cans with a plastic circular protrusion out the top.

My progress at this point...is that I have obtained my re-crystalled ICOM's (EC's) on my intended frequency of 441.0 MHZ. I have inserted 5C's on both the transmit and receive sides to provide compensation, if

needed. I split the compensation circuit on the control board to prevent Xmit audio from swamping the receiver. (I still get a circuit with about 20K resistance between them though. Figure that should be enough separation) I have tried inserting 9600 audio already on the Compensation circuit, but with only .6vdc signal level, no appreciable deviation was noted on the carrier. Getting the circuitry to adapt amplify the .6vdc output of my MFJ built 1270+MFJ built G3RUH is my current holdup. I have yet to find anyone in the Atlanta HAM community that can lay out the circuitry to match the G3RUH output with the 5vdc + deviation signal level required to properly deviate the MII's output. I would be happy to trade/pay/beg/whatever for anyone who could produce that circuit design for me. Given a circuit drawing, I can produce the whole thing, as I have the requisite assembly skills and tools. Just can't do the TTL design.

On the receive side, I must be close, as I can already receive the beacon transmitted by my personal station with the GE MII hooked into same 1270+G3RUH. It would help a great deal if you could give me the component ID's on the capacitors to remove in the IF section. BTW, my MII actually has a pin labelled IF which comes all the way out to the control board in front. Does yours do that? Aforementioned friends here didn't believe it until they saw it.

Finally, seems all of the Icoms for GE MII's have a filter RC circuit in near the varactor. Did you have to remove that filter to get proper xmit ops? Also, would be happy to forward two 5C's to you in exchange for circuit diagrams...then you could just plug them and next winter....nnnnnooooooo problems when it gets cold. Remember, temp. compensation only kicks in OUTSIDE of 0-55 degree C temp range.

I look forward to your reply.

Regards,
Steve Diggs, President
East Atlanta LAN

PS:both the RCVR and XMTR's have been tuned for my permanent freq.

— — — —

Top Of The Rock BBS - Lilburn, GA
UUCP: totrbbs.atl.ga.us
Phone: +1 404 921 8687

SYSOP: Steve Diggs
Snailmail: 4181 Wash Lee Ct.
Lilburn, GA 30247-7407

Date: Mon, 29 Aug 1994 01:28:17 GMT
From: ihnp4.ucsd.edu!usc!cs.utexas.edu!convex!news.duke.edu!godot.cc.duq.edu!
newsfeed.pitt.edu!dsinc!netnews.upenn.edu!feith1.FEITH.COM!kd3bj!

bbsuser@network.ucsd.edu
Subject: Packet Radio with apple LC ?
To: ham-digital@ucsd.edu

Adrie:

I use a Mac SE for packet. I have the SE connected to my PK-88 with a modem cable purchased at the local computer store. the PK-88 has several cables, because I use it with different radios. You just need the cable for your radio. If you don't want to make up a cable, MFJ sells cables for connecting various TNCs to various radios. The price of each is in the \$15 range.

For software, no special packet program is needed. On the Mac, I use shareware obtained from my local Mac user's group. It is called ZTerm, and among other neat features, has a full scrolling buffer. You can also write to your disk as you load the buffer with incoming and outgoing text.

I haven't tried an LC, but I think the fellow across the hall at work has one on his desk. Ij'll try my hookup on his machine and see how it goes.

Bob, NX3S
Robert.Garland@kd3bj.ampr.org

--

Robert Garland

Date: 28 Aug 1994 11:58:21 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!EU.net!sun4n1!freya.let.rug.nl!
rugch4!rugch4.chem.rug.nl!rudi@network.ucsd.edu
Subject: TNC-2 Source
To: ham-digital@ucsd.edu

HI all,

I'm desperately looking for the Z-80 SOURCE CODE for the TNC-2, as I want to build a Z-80 TNC with the new highly-integrated Z-80 KIO-chip which combines all peripherals into one chip. I have to modify the source for the location (addresses) of the peripherals.

I scanned the internet, but with no succes. The (internet-available) tapr disks seem only to contain the HEX-images for the firmware not the source. I faxed the TAPR directly, but got no response.

Maybe some of you know the (internet) location of the source or do have the source. If so, please share it with me ! thanks !!

rudi
(PE1NFP)

--

Rudi van Drunen	Internet: rudi@chem.rug.nl
	: rudi@rugrcx.rug.nl
Dept. of Biophysical Chemistry	X400 : c=nl;admd=400net;prmd=surf;
University of Groningen	o=rug;ou=chem;s=van.drunen;i=R;
The Netherlands	Bitnet:

Date: 29 Aug 94 14:48:32 GMT
From: news-mail-gateway@ucsd.edu
Subject: Unix vs DOS vs OS/2 vs NT
To: ham-digital@ucsd.edu

>On the other hand, Unix is often chastised for being obscure,
>complex, and
>difficult to maintain while I've found Unix to be much easier to
maintain >than PC's, MS-DOS, and Windows. And a PC running Unix
presents the worst of >both worlds. Rarely does a Mac run Unix, but it
can, and DOS also, at the >same time.

>73, David Kelly, N4HHE
>dkelly@nebula.tbe.com

>On the other hand, Unix is often chastised for being obscure,
complex, and >difficult to maintain while I've found Unix to be much
easier to maintain >than PC's, MS-DOS, and Windows. And a PC running
Unix presents the worst of >both worlds. Rarely does a Mac run Unix,
but it can, and DOS also, at the >same time.

>73, David Kelly, N4HHE
>dkelly@nebula.tbe.com

<Unix also has some "big system" features in it that make it easier to
<protect yourself from wayward software. I think we've got several
<unix machines around here that have close to 700 hours continuous
<uptime (last stop was due to an extended power failure that extended
<past the UPS hold up time..) The usual Microsoft DOS system has to
<be restarted several times a day...

<bill wb9ivr

Well, I guess I can weigh in and start another flame war (just checked my nomex suit. It should withstand a few flame blasts).

I use Unix, DOS (5.0), and Daytona (NT 3.5 beta) here. Each has its strengths and drawbacks. I agree with Bill that Unix has the strength of not allowing a user job to crash the system. HOWEVER, this only applies to BIG machines like a VAX or HP 9000. Most people who only have access to small machines like a PC or Mac don't have this luxury. Many of the Unix implementations don't have or use the MMU (memory management unit) which gives Unix this capability. I disagree that DOS machines typically need to be rebooted several times a day. What needs to be rebooted are DOS/Windows 3.1/Lan Manager machines and it is more like 10 times a day!

This is my current crusade. If you want an OS that DOES NOT let user jobs crash the OS it MUST HAVE an MMU. I was quite surprised to learn that Apple's System 7 apparently does not make use of an MMU. The result is that it is still possible to crash the OS even on a Mac. Apparently this happens less often with the Mac because the software is written better (I am not sure I believe this but it is possible).

Bill's suggestion of OS/2 (should be version 2.0 or higher) addresses my main complaint with OS's. It runs full MMU (read that protected virtual mode). The reason that it crashes less often is that the MMU as implemented in OS/2 (and NT) does not allow bugs to extend beyond the program that has failed!

We have an on-going flame war here where I work of Motorola vs Intel. My main complaint with the Motorola world (principly Mac's, but also embedded OS's such as pSOS, OS9, and VRTX) is that they do not implement memory protection by INSISTING on the presence of a hardware MMU. For those of you who program in C and C++, you have probably written at least one program with the following type of bug:

```
int      useful_function(int *number);
int      a_number;

function()
{
    useful_function(a_number);
}
```

The bug, of course, is that the line shoule read:
useful_function(&a_number). This code is guaranteed to write over

- 1) your code
- 2) your data
- 3) another process's code

- 4) another process's data
- 5) the OS
- 6) the interrupt vector table

Take your pick of any or all of the above. The bottom line is that such a bug is guaranteed to cause havoc in the machine it runs on if there is no MMU.

Let me translate here "NO MMU == 386 flat model" or "NO MMU == Motorola before 68030".

The flames from this post ought to be interesting!

Ray
WD5IFS
mack @mails.imed.com

End of Ham-Digital Digest V94 #289
